APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
PICH, PONNOREAY

ART UNIT	PAPER NUMBER
2135	

NOTIFICATION DATE	DELIVERY MODE
07/18/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

Docketing.Schaumburg@motorola.com
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	Application No.	Applicant(s)
Office Action Summary	09/587,932	QIU ET AL.
	Examiner	**Art Unit**	
	PONNOREAY PICH	2135	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 May 2008*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4 and 6-9* is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4 and 6-9* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☐ All   b)☐ Some * c)☐ None of:

       1.☐ Certified copies of the priority documents have been received.

       2.☐ Certified copies of the priority documents have been received in Application No. _____.

       3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

In response to the election/restriction requirement on 4/1/08, applicant elected

claims 1-4 and 6-9 for examination and cancelled all other claims. Claims 1-4 and 6-9

were examined. Applicant's remarks with respect to these claims were fully considered,

but are moot in view of new rejections made below in response to applicant's

amendments to these claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-4 and 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Wilson (US 5,742,680) in view of Goldstein et al (US 6,128,735).

Claim 1:

Wilson discloses:

1. Storing a first set of encryption data associated with a first data stream (col 4,

   lines 4, 14-26) wherein the first data stream includes a first number of services of

   at least two different service types (col 5, lines 5-17 and col 6, lines 8-27). *Data*

   of a first channel is encryption using a first algorithm and key, which implies that

   the algorithm and key used for the encryption of the first channel was stored.

2. Encrypting the first data stream having a first-level-of-encryption (col 4, lines 14-
   26 and col 5, lines 5-17 and 24-67).

3. Sending the first data stream to a destination device for decryption (col 4, lines
   14-26 and Fig 2).

4. Storing a second set of encryption data associated with a second data stream
   (col 4, lines 14-26) wherein the second data stream includes a second number of
   services of the at least two different service types that is different from the first
   number of services (col 5, lines 5-17 and 51-62 and col 6, lines 8-27). *One
   skilled should appreciate that in cable television systems, each channel has
   different programming, thus the data stream for a first channel is different than
   the data stream for a second channel.*

5. Encrypting the second data stream having a second-level-of-encryption, the first
   level-of-encryption being different from the second-level-of-encryption (col 4,
   lines 14-26 and col 5, lines 5-17 and 24-67).

6. Sending the second data stream to the destination device for decryption (col 4,
   lines 14-26 and Fig 2).

The above cited sections of Wilson describe a system where different satellites

transmit programs for different channels to cable boxes where the signals of each

channels are decrypted and descrambled. Each channel is encrypted using a different

algorithm and key. As evidenced by Goldstein (col 1, lines 58-62), the level of

encryption varies depending on the encryption algorithm used. Since each channel of

Wilson's invention is encrypted using a different algorithm, Wilson's invention has a

different level of encryption for each channel. The signal for a first channel in Wilson's

invention can be considered a first data stream and the signal for a second channel can

be considered a second data stream. Further, note that the signal for each channel is

composed of at least a video signal and audio signal (col 6, lines 16-27), thus the first

and second data stream disclosed by Wilson include a number of services of at least

two different service types.

Wilson's invention differs from applicant's claimed invention in that the signals for

each channel is transmitted from a different satellite (see Fig 2), which implies that

different memory are used to encrypt the first and second data stream with their

respective level of encryption. That is Wilson does not disclose "utilizing a common

memory to encrypt the first data stream at said first-level-of-encryption and to encrypt

the second data stream at the second-level-of-encryption". However, Goldstein

discloses of an invention which encrypts different data streams with different encryption

levels using either multiple encryption engine or a common encryption engine having a

common memory (col 8, lines 21-32).

In light of Goldstein's teachings, it would have been obvious to one of ordinary

skill in the art at the time applicant's was made to modify Wilson's invention so that it

utilizes a common memory to encrypt the first data stream at said first-level-of-

encryption and to encrypt the second data stream at the second-level-of-encryption. It

would have been obvious to one of ordinary skill in the art to do so replacing multiple

encryption engines with a single encryption engine capable of different levels of

encryption is simple substitution of one known element for another to obtain predictable

results.

Claim 2:

Wilson further discloses wherein the first set of encryption data comprises at

least one encryption key (col 4, lines 14-26; col 5, lines 5-13).

Claim 3:

Wilson further discloses wherein the destination device comprises a set-top box

(col 7, lines 9-23).

Claim 4:

Wilson further discloses storing a plurality of decryption algorithms at the set-top

box (col 5, lines 37-67 and col 7, lines 9-23). The set-top box has several smart cards,

each one containing a different decryption algorithm for different channels.

Claim 7:

Wilson further discloses decrypting the first data stream at the set-top box; and

decrypting the second data stream at the set-top box (col 5, line 5-col 6, line 15).

Claim 8:

Wilson does not explicitly disclose storing a portion of the first set of encryption

data in a RAM. However, official notice is taken that it was well known in the art that

data that are actively being used by a computing system is typically loaded onto RAM.

Since Wilson's invention uses a first set of encryption data to encryption data for

transmission to set-top boxes, it would have been obvious to one of ordinary skill in the

art to store a portion of the first set of encryption data in a RAM. One skilled would have

been motivated to do so because data actively being used are typically kept in RAM in

computer systems since it allows fast access to the data when needed.

Claims 6 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Wilson (US 5,742,680) in view of Goldstein et al (US 6,128,735) in view of Gammie et al

(US 5,381,481).

Claim 6:

Wilson discloses wherein the first-level-of-encryption utilizes a first encryption

algorithm and wherein the second-level-of-encryption utilizes an encryption algorithm

different from said first encryption algorithm (col 4, lines 14-26).

Wilson does not explicitly disclose the first encryption algorithm is the Data

Encryption Standard. However, Gammie discloses of use of the Data Encryption

Standard to encrypt data for transmission (col 5, lines 27-39). At the time applicant's

invention was made, it would have been obvious to one skilled in the art to utilize the

Data Encryption Standard for the first encryption algorithm in Wilson's modified

invention. One skilled would have been motivated to do so because the Data

Encryption Standard offers a high level of security for securing data. Further, note that

Wilson is not concerned with the types of encryption algorithms used in his invention at

all, only requiring that they are different for each channel, thus it would have been

obvious to use the known Data Encryption Standard as one of the encryption algorithm

since it was a well known encryption standard at the time applicant's invention was made.

Claim 9:

Wilson does not explicitly disclose storing a portion of the first set of encryption data in a register of a microprocessor. However, Gammie discloses of an encryption system where a portion of a first set of encryption data is stored in a register of a microprocessor (col 9, lines 37-45). At the time applicant's invention was made, it would have been obvious to one skilled in the art to further modify Wilson's invention according to the limitations recited in claim 9. One skilled would have been motivated to do so because all processing in computing systems are done by a processor, thus to encrypt data using a first set of encryption data for transmission in Wilson's invention, it is necessary that the first set of encryption data is loaded onto and stored for at least a time in a register of a microprocessor.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to PONNOREAY PICH whose telephone number is

(571)272-7962. The examiner can normally be reached on 9:00am-4:30pm Mon-Thurs.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Kim Vu can be reached on 571-272-3859. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ponnoreay Pich/
Examiner, Art Unit 2135
/KimYen Vu/

Supervisory Patent Examiner, Art Unit 2135